



COUNTY OF YORK JOB DESCRIPTION

GIS Analyst
Financial & Management Services
Computer Support Services

Human Resources Division
120 Alexander Hamilton Blvd.
Yorktown, Va. 23690
Phone: 757-890-3687
Fax: 757-890-3699

GENERAL STATEMENT OF JOB

Designs, creates, and maintains a variety of digital maps and database information. Develops application programs for editing, mapping, and analyzing data. Develops complex geographic analyses using ArcGIS applications including ArcMap, TIN, and GRID. Researches a variety of data, and prepares reports, maps, and cartographic products. Maintains and updates a variety of digital information, develops and implements QA/QC procedures for data from York County and other sources, and trains County employees to use mapping applications. Responsible for editing digital maps and verifying accuracy. Work is performed under general supervision of the GIS Supervisor.

ESSENTIAL JOB FUNCTIONS

Develops complex GIS applications and data layers; performs spatial analyses of geographic data sets using ArcGIS programs including ArcMap, GRID and TIN; designs, creates, and maintains programs written in VBA (with ArcObjects), Visual Basic .NET, and Python to be used in analysis, cartographic production, data maintenance, geoprocessing, and editing; designs, creates and maintains custom and standardized maps, geographic databases, data files, statistics, reports, and analyses for dissemination to County staff members, general public, and the business community; develops and maintains automated cartographic elements and products.

Performs research and data collection necessary to compile, digitize, attribute, query, edit, and prepare cartographic products and analyses.

Creates, edits, and maintains data files for the County's geographic information programs.

Designs, implements, and documents data entry and QA/QC protocol and procedures.

Provides training to County employees on GIS applications.

Provides technical assistance to users and customers from within the County, the general public, and the business community and assists in maintaining a quality public relations program; trouble-shoots and solves problems as non-routine situations arise.

Assists with coordination and supervision of technical programs including parcel addressing and identification, land records management, map design, production, maintenance, etc.

Performs work on technical projects such as parcel identification, planimetrics updating, and special projects, as necessary.

Coordinates GIS data conversion and manipulation from County and outside sources.

Develops and maintains system documentation of programs and supporting instructional manuals for users.

ADDITIONAL JOB FUNCTIONS

Assists in the maintenance of equipment, files, supplies, and the geographic information system of the County, and performs other related work as required.

ENTRY KNOWLEDGE, SKILLS, AND ABILITIES

Thorough knowledge of GIS and cartographic principles including map projections, datums, spatial data types and formats, and topology.

Thorough knowledge of programming with Visual Basic for Applications (VBA) using Arc Objects, Visual Basic .NET, and Python.

General knowledge of ArcGIS software.

General knowledge of Windows operating systems and administration.

General knowledge of orthophotography and other image formats.

General knowledge of relational databases and special statistics.

General knowledge of parcel updating and record keeping.

General knowledge of physical geography, particularly soils, hydrology, and topography.

Effective oral and written communication skills.

EDUCATION AND EXPERIENCE

Bachelor's degree in geography, cartography, computer science or a closely related field, and 3 to 5 years of experience with geographic information systems; an extensive knowledge of ArcGIS Geographic Information System software including ArcMap, TIN, and GRID; extensive knowledge of programming in Visual Basic for Applications (VBA), VB .NET, and Python using ArcObjects; experience in cartography and automated mapping; experience with Microsoft Windows-based workstations; or any equivalent combination of education and experience which provides the required knowledge, skills, and abilities.

PHYSICAL & MENTAL STANDARDS NEEDED FOR ESSENTIAL JOB FUNCTIONS

Physical Requirements: Must be physically able to operate a variety of machinery and equipment including digitizers, copiers, computers, plotters, calculators, printers, facsimile machines, tape drives, etc. Requires occasional lifting of computer equipment or components of up to 55 pounds. Physical demand requirements are for those for Sedentary Work.

Data Conception: Requires the ability to compare and/or judge the readily observable, functional, structural, or compositional characteristics (whether similar or divergent from obvious standards) of data, people, or things.

Interpersonal Communication: Requires the ability of speaking and/or signaling people to convey or exchange information. Includes receiving instructions, assignments, or directions from others.

Language Ability: Requires the ability to read a variety of reports, maps, handbooks, files, records, etc. Requires the ability to prepare maps and other land related material using prescribed formats, and conforming to the rules of punctuation, grammar, diction, and style.

Intelligence: Requires the ability to apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions; to interpret a variety of technical instructions in mathematical or diagrammatic form; and to deal with abstract and concrete variables.

Verbal Aptitude: Requires the ability to record and deliver information, to explain procedures, to follow oral and written instructions. Must be able to communicate effectively.

Numerical Aptitude: Requires the ability to utilize mathematical formulas; to add and subtract; multiply and divide; utilize decimals and percentages; understand and apply the theories of geometry and descriptive statistics.

Form/Spatial Aptitude: Requires the ability to visualize physical structures; to visualize how to divide complex-shaped patterns into sections.

Motor Coordination: Requires the ability to coordinate hands and eyes rapidly and accurately in using mapping and office equipment.

Manual Dexterity: Requires the ability to handle a variety of items such as office equipment, control knobs, switches, etc. Must have minimal levels of eye/hand/foot coordination.

Color Discrimination: Requires the ability to differentiate between colors and shades of color.

Interpersonal Temperament: Requires the ability to deal with people beyond giving and receiving instructions. Must be adaptable to performing under stress and when confronted with persons acting under stress.

Physical Communication: Requires the ability to talk and hear.

Prepared by: _____

Date: _____

Approval: _____